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ABSTRACT

THIS STUDY INVESTIGATED THE ROLE OF ONE FACTOR IN THE DRAMATIC CONFORMITY REDUCTION PRODUCED BY A PARTNER WHO AGREES WITH S IN THE FACE OF GROUP PRESSURE--THE INDEPENDENT ASSESSMENT OF SOCIAL AND PHYSICAL REALITY PROVIDED BY THE PARTNER. TWO SOCIAL SUPPORT CONDITIONS, VARYING ONLY IN S'S PERCEPTION OF THE PARTNER'S ADEQUACY AS A VALID REFERENCE FOR MAKING JUDGMENTS, WERE CREATED. A UNANIMOUS GROUP WAS ALSC INCLUDED TO PROVIDE A CONFORMITY BASELINE. RESULTS INDICATED THAT CONFORMITY WAS SIGNIFICANTLY REDUCED IN BOTH SOCIAL SUPPORT CONDITICNS; MOREOVER, THE VALID SOCIAL SUPPORTER PRODUCED A SIGNIFICANTLY GREATER DECREASE IN CONFORMITY THAN DID THE INVALID PARTNER. THE DATA SUPPORT THE HYPOTHESIS THAT INDEPENDENT ASSESSMENT OF REALITY PROVIDED BY A PARTNER IS CRUCIAL TO THE EFFICACY OF SOCIAL SUPPORT IN REDUCING CONFORMITY. (AUTHOR)

SOCIAL SUPPORT AND CONFORMITY: THE ROLE OF INDEPENDENT ASSESSMENT OF REALITY

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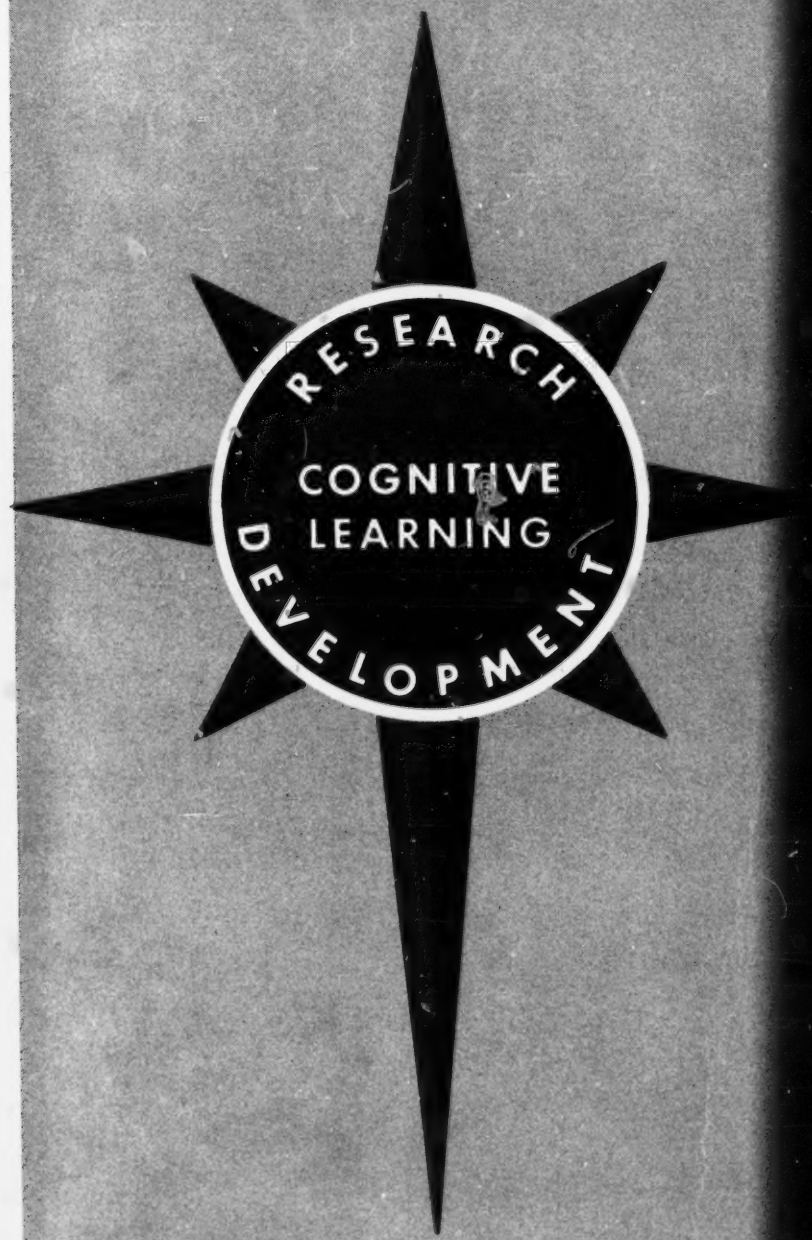

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SOCIAL SUPPORT AND CONFORMITY:

THE ROLE OF INDEPENDENT ASSESSMENT OF REALITY

By Vernon L. Allen and John M. Levine

Report from the Peer Group Pressures on Learning Project
Vernon L. Allen, Principal Investigator

Wisconsin Research and Development
Center for Cognitive Learning
The University of Wisconsin
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This Technical Report is from the Peer Group Pressures on Learning Project in Program 1. General objectives of the Program are to generate new knowledge about concept learning and cognitive skills, to synthesize existing knowledge, and to develop educational materials suggested by the prior activities. Contributing to these program objectives, this project is directed toward identification of the effects of peer group pressures on the utilization of concepts already learned and on the learning of new concepts.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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ABSTRACT

This study investigated the role of one factor in the dramatic conformity reduction produced by a partner who agrees with S in the face of group pressure—the independent assessment of social and physical reality provided by the partner. Two social support conditions, varying only in S's perception of the partner's adequacy as a valid reference for making judgments, were created. A unanimous group was also included to provide a conformity baseline. Results indicated that conformity was significantly reduced in both social support conditions; moreover, the valid social supporter produced a significantly greater decrease in conformity than did the invalid partner. The data support the hypothesis that independent assessment of reality provided by a partner is crucial to the efficacy of social support in reducing conformity.

I
INTRODUCTION

A considerable amount of research has been directed toward investigating the situational determinants of conformity to a group norm (Allen, 1965). One situational variable has been shown significantly and consistently to reduce the level of conformity—the presence of a partner providing the correct or popular answer. "Social support" was the term used by Asch (1951) to designate the condition in which a confederate gave the correct response prior to S's answer. Providing a partner in this manner dramatically decreases the level of conformity, as substantiated by several studies (Asch, 1951; Malof and Lott, 1962; Kiesler, Zanna, DeSalvo, 1966: Allen and Levine, 1968b).

The psychological mechanisms responsible for the effectiveness of social support are still not clearly understood. Several possible explanations for social support have been offered: (a) breaking group consensus, (b) anxiety reduction, (c) decreased social isolation, and (d) independent assessment of reality. These mechanisms will be discussed below. It should be noted that, while conceptual distinctions can be made, these mechanisms may well often operate together.

On the basis of results from one of his early studies, Asch (1955) concluded that the essential variable mediating the effectiveness of social support was the mere breaking of group unanimity. In one condition of Asch's social support study, a confederate gave an answer even more incorrect than the erroneous group consensus. Conformity was reduced in this condition, where group unanimity was destroyed but S did not experience a partner's agreement. However, breaking group unanimity does not seem to be a completely satisfactory explanation of the social support phenomenon.

First, conformity was not reduced as much by mere breaking of group consensus as by the presence of a partner (Asch, 1955). Moreover, a methodological problem in Asch's study produced a confounding of the degree of extremeness of the group norm, as Allen and Levine (1968a) have pointed out. In addition, these investigators have demonstrated that breaking group unanimity does not significantly reduce conformity on subjective items (such as opinions), though providing a partner does produce a significant conformity reduction. Allen and Levine (1968a) suggested that, even if breaking group unanimity were sufficient to reduce conformity on objective visual items, the underlying psychological process may differ from that responsible for reducing conformity when a partner is present. They suggest that, in the case of objective items, an extremely incorrect confederate breaking group unanimity may cause S to reject the group as a valid referent. The social support effect, on the other hand, may be mediated by one or a combination of other factors.

Observational evidence reported by Asch (1952) and more quantitative results in Allen and Levine's (1968a) study suggest that another factor, anxiety reduction, may play a role in the social support phenomenon. Research has demonstrated that group opposition in the conformity situation is a stressful experience, producing physiological responses indicative of anxiety, i.e., increased GSR response (Gerard, 1964) and increased fatty acid level (Back and Bogdonoff, 1964). In one study, the high level of anxiety produced by group opposition decreased if S conformed to the group (Bogdonoff, Klein, Estes, Shaw, and Back, 1961). Such evidence suggests that anxiety may be a variable mediating high conformity. Moreover, correlational studies quite consistently find greater conformity among persons scoring high on self-report indices of anxiety (Crutchfield, 1955; Meunier and Rule, 1967). The relation between conformity and anxiety would lead to the prediction that a condition which reduced the experienced anxiety and stress in a conformity situation would decrease the level of conformity. Asch did observe

that Ss who had a partner reported being less emotionally upset than did Ss facing a unanimous opposing group. In Allen and Levine's study Ss also indicated feeling relatively less anxious in the presence of a social supporter. It is possible, therefore, that the presence of a partner diminishes the stress and anxiety normally experienced in a unanimous pressure group and that the reduced anxiety level, in turn, is responsible for the reduced conformity in the social support condition. It should be noted that, while anxiety reduction is conceptually distinct from the other mechanisms which may underlie the effect of social support, in reality anxiety reduction may be inextricably tied to, and may even mediate, the relations between these mechanisms and conformity reduction.

A third possible explanation for the social support effect emphasizes the importance of S's social isolation in the presence of the unanimous group. This explanation is, of course, more interpersonal or social than the preceding one. In the process of socialization one clearly receives negative reactions from others for disagreeing with the majority. Moreover, persons who deviate from group consensus expect negative evaluation and rejection from the group (Gerard and Rotter, 1961). And the expected group reaction does, in fact, often occur (Schachter, 1951; Emerson, 1954; Sampson and Brandon, 1964). According to this explanation, the crucial element in the social support condition is the public presence of a partner, i.e., a person who dissents from the group and agrees with S. In other words, the effectiveness of social support depends on S's perception that he does not stand as an isolated deviate against the group and that the other group members are aware that S is not alone.

One other factor that may contribute to the effectiveness of social support we will call "independent assessment of reality." By this term we mean that the social supporter's efficacy may stem from his providing S with an independent source of evidence against which to compare perception of the physical and social world. Festinger (1950) distinguished between physical and social reality, and noted that one must rely on other people to validate judgments on matters not amenable to objective confirmation, such as opinions and attitudes. It is also clear that, in the absence of objective means of measurement, even matters of physical reality may depend on social consensus for validation. Since we have extensive experience in observing veridical social consensus on factual and objective judgments, unanimous but erroneous consensus on simple visual discriminations by a group of peers might be very disquieting—as many of Asch's (1952) Ss reported. In such situations, agreement from one other person, who apparently bases his judgments on independent estimates of the stimuli, might re-establish S's confidence in his ability to accurately perceive reality. Thus, one important function of the social supporter, we hypothesize, is to provide an independent confirmation of the individual's own estimate of the physical and social world when the remaining group members unanimously disagree.

The purpose of the present study is to evaluate the contribution of this last factor—independent assessment of reality—to the effectiveness of social support. To adequately accomplish this purpose, two conditions must be created in which the objective responses of the social supporter are identical, so that the group's perception of S and the supporter will not vary across conditions. However, in one of the two otherwise identical social support conditions, the partner's responses will not be based on an independent assessment of reality.

In brief, Ss in two conditions will be confronted by a social supporter who dissents from an erroneous group by giving correct answers. In one condition, S will be led to believe that only he knows that the partner suffers from a severe visual handicap that prevents accurate perception of the experimental stimuli; in the second condition, S will believe that the partner is capable of accurately perceiving the stimuli. Thus, in the two conditions the partner will give the same correct answers, so the group will perceive S is not alone. But the partner will be perceived by S as capable of an independent assessment of reality only in one condition. A unanimous condition, in which S is faced by a unanimous and erroneous group, will be employed as a baseline of conformity. It is hypothesized that the partner who is ostensibly incapable of independently assessing reality will be less effective in reducing conformity than will the partner in the normal social support condition.

II
METHOD

DESIGN

A 3 x 2 x 3 analysis of variance design was used, containing the following factors: Group Pressure Condition (Unanimous, Valid Social Support, Invalid Social Support), Sex of S (Male, Female), and Type of Item (Visual, Information, Opinion).

In the Unanimous condition, four simulated Ss, answering before S, gave unanimous responses to the experimental stimuli: on critical trials, the group gave unpopular or incorrect answers; on remaining trials, the group gave popular or correct responses. In the two Social Support conditions, one person, answering fourth in the group of five, dissented from the erroneous responses of the three other simulated Ss on the critical trials by giving popular or correct answers. In the Valid Social Support condition, the supporter appeared capable of performing the experimental task. In the Invalid Social Support condition, the supporter was made to appear almost completely incapable of adequately performing the task. Here, the supporter wore specially-made eyeglasses with extremely thick lenses, which distorted appearance of the wearer's eyes and gave the impression of severely limited visual ability. (The lenses were ground to allow normal vision to the wearer.)[1] In addition, E gave the supporter (a confederate) a vision "test" in S's presence to validate the supporter's visual handicap.

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[1] The glasses were specially constructed by a local oculist from flat lens blanks (Plano RX), 10 mm thick. Lenticular plus curves were ground on both sides (ocular, +4.00; outside, +11.00), leaving a 30 mm unground central circular area on each side of the lens to protect the wearer's vision. Lenses were mounted in brown frames suitable for either male or female wearers.

PROCEDURE

Each S was taken individually from the waiting room to the experimental room, where he was asked to fill out a self-descriptive adjective check list before the experiment began. The E left S alone for approximately five minutes, and then returned with another S (actually the E's confederate). One male confederate and one female confederate served in same-sex groups throughout the experiment. The E explained that sufficient rooms were not available and, hence, the two Ss would work on their questionnaires together until another room became available. After leaving S and the confederate alone for a few minutes (during which the confederate was instructed to politely avoid any conversation), E returned and told the confederate that another room was available. The procedure at this point differed as a function of experimental condition.

In the Invalid Social Support condition the confederate had entered the research room wearing extremely thick glasses which, though allowing normal vision, gave the appearance of limited eyesight. After E asked the confederate to follow him to another room, the confederate apologetically engaged E in conversation in the S's presence. The confederate asked if the experiment involved any long-distance vision and, when E replied affirmatively, the confederate stated that his (her) extremely limited eyesight was restricted to perceiving objects at close range. The E asked the confederate if he could read an easily legible sign on the wall; the confederate gamely attempted the task, but failed. The E stated that although the confederate was clearly incapable of perceiving the experimental stimuli to follow, his presence was necessary because five Ss were essential for functioning of the apparatus. Thus, E asked the confederate to participate, stating "Just sit in anyway, as long as you are here. Since

you won't be able to see the questions, answer any way you want, randomly maybe. I won't record your answers." In the Valid Social Support and Unanimous conditions the confederate neither wore glasses nor engaged E in conversation.

Before taking the confederate to another room, E stated that the answering positions of Ss in the experiment to follow had been randomly determined. The E stated that S would respond last (fifth), while the confederate would respond next to last (fourth). The confederate was then taken to another S's room. The procedure was repeated until the confederate had visited all four Ss.

After all Ss had completed the adjective check-list, the four Ss and the confederate were taken to the experimental room containing booths and the projection screen. Seated in the five booths, Ss were asked to make accurate judgments on visual, information, and opinion items projected on the screen. Subjects were led to believe, through instructions and practice trials, that the signal lights in their booths indicated responses of the other four group members and that each S answered in one of the five response positions. Actually, lights in all booths are controlled by E from the master control panel. Rather than one group member answering in each of the five positions, all Ss answered last (fifth). In this manner, E could simulate the first four responses to agree or disagree with Ss' private judgments.

At the completion of the experiment, Ss filled out a postexperimental questionnaire designed to ascertain attitudes toward the dissenter. Finally, a careful debriefing was conducted in which the experiment was explained and questions were answered.

STIMULI

The 30 items used in the experiment were chosen from a series developed by Tuddenham, Macbride and Zahn (1956). Stimuli were of three types: (1) Visual perception items required judgment of relationships among visual stimuli. For instance, S had to match the length of a standard line against one of nine comparison lines. Each of the alternative responses corresponded to a number below one of the panel switches. (2) Information items dealt with relatively simple factual questions. For example, "On the average, how many meals per day do Americans eat?" Each alternative was a number from one to nine, corresponding to one of the switches. (3) Opinion items consisted of such statements as "I could be perfectly happy without a single friend" and "Most young people get too much education." These items were answered by using one of the nine labels below the switches ranging from "Very Strongly Agree" to "Very Strongly Disagree."

Of the 30 items used, 12 were critical (group pressure)—4 items each of visual, information, and opinion balanced over the series. On critical items, responses of the simulated group were placed at the 95th percentile of responses given by a standardization group answering alone. For information and opinion items, the standardization group was 300 introductory psychology students who had filled out questionnaires in class. For visual items, the standardization group was introductory psychology students tested by Tuddenham, Macbride, and Zahn (1956).

In this study, only 40% of the trials were critical, as compared to 60% critical trials in the Allen and Levine (1968b) experiment. The relatively low percentage of critical trials in the present study was employed to reduce the probability that Ss in the Invalid Social Support condition would become suspicious of the manipulation. That is, since the supporter was ostensibly incapable of accurately seeing the stimuli in the Invalid Social Support condition, the more frequently he dissented from the group by giving the correct answer, the more suspicious Ss might become regarding the partner's vision. Hence, the percentage of critical trials was reduced from 60% to 40%.

The remaining 18 stimuli, 6 of each type, were neutral items. On these filler items, the simulated group gave popular or correct answers in all conditions.

APPARATUS

The apparatus was a Crutchfield-type electrical signalling device (Crutchfield, 1955). It consists of five adjacent booths containing signal lights and nine answer switches, a master control panel in an adjoining room, a slide projector operated by remote control, and a projection screen. The apparatus enabled E to simulate group responses to questions projected on the screen, so that Ss believed they saw true responses of one another.

SUBJECTS

The Ss were 137 introductory psychology students (65 males and 72 females) at the University of Wisconsin. Data from 14 Ss were discarded because of their knowledge of the experimental deception, as determined by

postexperimental questionnaire and interview, leaving a total of 123 Ss (58 males and 65 females). Subjects received credits applicable to their class grade for participating in the experiment. Four randomly chosen Ss of the same sex were always tested together as a group.

Number of Ss used in the Valid Social Support condition (24) was lower than in either the Invalid Social Support (47) or Unanimous (52) condition. Fewer Ss were used in the Valid Social Support condition because previous experiments have shown the low conformity level in this condition to be fairly stable (Allen and Levine, 1968a, 1968b). In the interests of experimental economy, then, fewer Ss were run in the Valid Social Support condition, so that more Ss might be available for use in the Invalid Social Support condition and the Unanimous condition (where a stable baseline was desired).

METHOD OF ANALYSIS

For each S a mean conformity score was computed separately for visual, information, and opinion items. Mean conformity scores were calculated by summing the algebraic differences between initial responses and responses given in the group situation and dividing by the number of items used. For information and opinion items, initial responses were obtained from questionnaires which Ss had filled out in class earlier; for visual items, modal responses of the Tuddenham et al. (1956) standardization group were used.

III
RESULTS

SUCCESS OF EXPERIMENTAL MANIPULATIONS

Data from postexperimental questionnaires and E's observations indicated that the manipulations were effective. On the questionnaires Ss were asked to indicate the group member with whom they tended most often to agree. In the Unanimous condition, where no group member agreed consistently with S, only 4% of the Ss reported Person 4 as often agreeing with them. On the other hand, in the Valid Social Support and Invalid Social Support conditions, a high percentage of Ss correctly indicated that Person 4 consistently agreed with them (71% and 64%, respectively). Note that the percentage of Ss in each social support condition who correctly identified person four is very similar, indicating no differential awareness of partner's agreement with S across the two social support conditions.

In the present experiment, 66% of all social support Ss reported agreement with Person 4, while in an earlier study (Allen and Levine, 1968b) 96% perceived Person 4 as a partner. It seems probable that the relatively low percentage of Ss reporting agreement with Person 4 in the present experiment is due to the decreased percentage of critical trials in this study.

In addition to identifying one group member as a partner, Ss rated the social supporter on eight 12-point evaluative scales in the postexperimental questionnaire (Intelligence, Accuracy, Sincerity, Independence, Hearing, Vision, Personal Liking, Group Liking). Differences in evaluation of the partner between the Valid Social Support and Invalid Social Support conditions attained statistical significance in three instances. Subjects in the Valid Social Support condition liked the partner more ($t = 1.93$, $p < .05$)[2] and rated the partner as having better vision ($t = 1.79$, $p < .05$) than did Ss in the Invalid Social Support condition. This postexperimental evaluation of the partner's relatively poor vision in the Invalid Social Support condition attests to the success of the manipulation, particularly since the partner had demonstrated some visual ability by correctly dissenting from the group on 40% of the trials. Interestingly, in another modality (hearing) the partner was evaluated more positively in the Invalid Social Support condition than in the Valid Social Support condition ($t = 1.79$, $p < .05$). Perhaps Ss assumed an inverse relation between visual and auditory acuity because of the common assumption that blind persons develop extraordinary hearing ability to compensate for their visual handicap.

In observing Ss' reactions to both the experimental manipulations and the debriefing, E's impressions generally validated the other measures of manipulation success. First, Ss were attentive to the interaction between E and the ostensibly visually handicapped confederate in which the confederate explained his (her) visual problem and failed the vision test. That is, Ss invariably stopped work on their questionnaires and visually attended to the E-S interaction. Moreover, Ss listened attentively to the assignment of response positions for the forthcoming group task. In addition, during the debriefing, Ss frequently expressed surprise and disbelief that the confederate was not a "real" S and actually had normal vision. These observations, together with the responses given on the postexperimental questionnaire, strongly suggest that the experimental manipulations were indeed successful.

CONFORMITY DATA

Table 1 presents results of the analysis of variance conducted on mean conformity

[2] All t tests reported are one-tailed.

Table 1

Analysis of Variance
on Mean Conformity Scores

Source	df	MS	F
Conditions (A)	2	10.39	12.99**
Sex of S (B)	1	2.01	2.51
A x B	2	2.47	3.09*
Error (a)	117	.80	
Items (C)	2	3.21	7.24**
A x C	4	.62	1.39
B x C	2	.76	1.70
A x B x C	4	.21	
Error (b)	234	.44	

* $p < .05$
** $p < .01$

scores.[3] Both the Conditions and Items main effects were significant at less than the .01 level. In addition, the Conditions x Sex of S interaction was significant at less than the .05 level.

Mean conformity scores for the three types of items in the Unanimous, Valid Social Support, and Invalid Social Support conditions are presented in Table 2. Inspection of the overall condition means indicates that both social support conditions produced marked reductions in conformity, compared to the Unanimous condition. Conformity in both the Valid Social Support (.36) and Invalid Social Support (.64) conditions was significantly lower than in the

[3] An unweighted-means analysis of variance was used (Winer, 1962).

Table 2

Mean Conformity Scores on Visual, Information and Opinion Items in the Three Conditions

Condition	Type of Item			
	Visual	Information	Opinion	Mean
Unanimous	1.03	.81	1.09	.97
Valid Social Support	.66	.20	.22	.36
Invalid Social Support	.79	.44	.70	.64

Unanimous (.97) condition ($t = 5.13$, $p < .0005$ and $t = 2.77$, $p < .005$, respectively). Moreover, the Valid Social Support condition reduced conformity significantly more than did the Invalid Social Support condition ($t = 2.37$, $p < .01$). It can be seen in Table 2 that the overall condition results discussed above hold consistently across the three types of items (Visual, Information, Opinion); and, as noted above, a significant Conditions x Items interaction was not obtained.

The other two significant effects in the analysis of variance are of less interest than the Conditions effect. The Items effect cannot be meaningfully evaluated because the three types of items differ in difficulty, variability, and susceptibility to group influence. The Conditions x Sex of S interaction is clearly due to significantly lower conformity in the Unanimous condition for males (.72) than for females (1.23) ($t = 3.36$, $p < .01$). Greater conformity of females has been frequently reported in the literature (Applezweig and Moeller, 1958; Beloff, 1958; Tuddenham, 1958).

IV
DISCUSSION

The present experiment was designed to investigate one of the factors thought to underlie conformity reduction produced by the presence of a social supporter (i.e., a partner who correctly dissents from an erroneous group prior to S's answer). Specifically, we hypothesized that one important function served by social support is provision of an independent assessment of physical and social reality. In operational terms, the hypothesis was tested by creating two social support conditions that S believed appeared identical to other group members. In this way, in both social support conditions S had a partner who agreed with him in opposition to the group. But in one of the social support conditions S knew (but the group did not) that the partner's answers—though correct or popular and in agreement with S's private responses—merely reflected random or arbitrary guessing. It was made obvious to S by means of a preexperimental ruse that the person who was later responsible for social support had extremely poor vision. Thus, although S had a partner under these circumstances, the partner was obviously of little help in independently confirming reality, i.e., in supplying an independent judgment of physical and social reality in the experimental situation.

Results showed that the partner who was unable to provide valid confirmation of reality was less effective in reducing conformity than was the partner in the usual support situation. Therefore, the hypothesis tested in the present study was supported.

The greater effectiveness of the veridical social supporter suggests that the partner's perceived ability to provide independent assessment of stimuli does indeed contribute to the observed independence produced by the partner's presence. The two social supporters differed only on the dimension of perceived visual acuity, and, once in the experimental situation, Ss clearly saw that visual ability was essential to adequate task performance.

The significant difference in conformity reduction produced by the two social support conditions in this study is particularly striking since on 40% of the trials the incompetent supporter correctly dissented from the erroneous group. Thus, over the course of the experimental trials, the incompetent social supporter did in fact quite often give correct or popular answers. It seems reasonable that Ss might have come to believe, by the end of the series of trials, that the allegedly incompetent partner was actually capable of accurately judging the stimuli. Such belief would, of course, attenuate the difference in conformity between the Valid and Invalid Social Support conditions. It is likely that some increase in the partner's perceived ability did occur over trials, and was probably responsible for greater conformity in the Invalid Social Support condition than in the Unanimous group condition. Yet the experimental manipulation was strong enough to overcome any increased belief in the partner's visual competence, since a significant overall difference in conformity reduction was obtained in the two social support conditions. The enduring efficacy of the manipulation was evident in a questionnaire administered at the end of the experiment—Ss rated the vision of the Invalid Social Supporter as significantly poorer than that of the Valid partner.

It should be recalled at this point that even the ostensibly incompetent partner did produce a significant decrease in conformity as compared to the unanimous group. This result may be due, in part, to attribution of competence to the partner by the end of the series of trials, as mentioned above. However, we do not claim that independent assessment of reality is the single factor wholly responsible for the effectiveness of social support in reducing conformity. Conformity reduction produced by a correct dissenter may be partially mediated by anxiety reduction provided by the presence of a supporter, i.e., by S's not being alone in the group. That is,

S may feel less anxious and concerned about the group's potential reaction when another person also deviates from group consensus, even if the partner's behavior does not corroborate the (physical or social) correctness of S's answer. In everyday life, being the only person to give a particular answer that deviates from consensus is often accompanied by negative sanctions from majority members, but such sanctions may be eliminated or reduced when one is not the sole dissenter.

At any rate, it seems fair to conclude that independent assessment of social and physical reality is one of the important variables responsible for the independence in the social support situation. The contributory role of other variables such as anxiety reduction and perceived reaction of the group should not be ignored, however.

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